

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 09-293681

(43)Date of publication of application : 11.11.1997

(51)Int.Cl.

H01L 21/205  
C23C 16/44  
// H01L 21/31

(21)Application number : 08-107236

(71)Applicant : SHARP CORP

(22)Date of filing : 26.04.1996

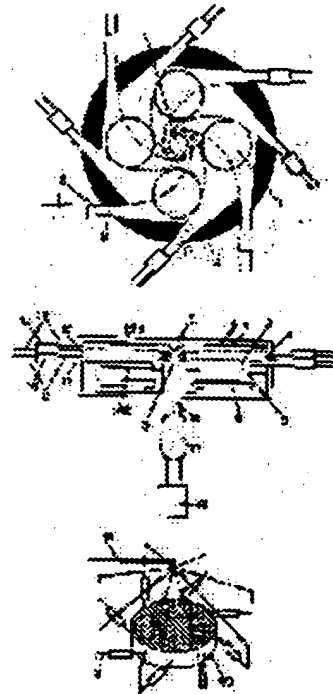
(72)Inventor : WATANABE MASANORI

## (54) VAPOR GROWTH DEVICE

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To enhance the uniformity of the thicknesses of thin films at the time of formation of the thin films on wagers, to facilitate maintenance of a vapor growth device of the eliminate fluctuations of an air flow at the time of changing gas species in the vapor growth device, such as an MOCVD device, which treats a plurality of sheets of the wafers, which are used for manufacturing a semiconductor element, en bloc.

**SOLUTION:** A vapor growth device is formed into a constitution, wherein a plurality of introducing tubes 2 for introducing gas are provided in the outer peripheral part of a reaction furnace 20, an exhaust bent 3 is provided in the center part of the furnace 20 and the extension direction of the tubes 2 is extended in such a direction that it does not cross the vent 3 to make a gas flow in such a way that the gas flow eddies, whereby the constitution can contribute to the enhancement of the uniformity of the thicknesses of thin films, which are respectively formed on wafer, and the enhancement of the easiness of maintenance of the device. Moreover, as the device has a plurality of the tubes 2, different kinds of gases are introduced in the device through the respective tubes 2 to revolve the wafers 1, whereby the thin films can be laminated on the wafers 1 by the growth of roughly one atomic layer.



## LEGAL STATUS

[Date of request for examination]

14.02.2000

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]